

**IN THE SPECIFICATION:**

Please amend the title of the application to read as follows:

- - HETEROJUNCTION BIPOLAR TRANSISTOR HAVING SPECIFIED  
LATTICE CONSTANTS - -

Amend paragraph [0021] at page 10 as follows:

[0001] For a reliability test of HBTs, ~~an~~ a temperature accelerated test is commonly conducted. This temperature accelerated test (hereinafter, simply referred to as the "reliability test") uses a so-called Arrhenius model which is one of reaction kinetics models. This Arrhenius model is known as the expression of a following equation (1):

$$L = A \cdot \exp(E_a/kT) \quad \dots (1)$$

wherein L is a lifetime (h), A is a constant (h),  $E_a$  is an activation energy (eV), k is the Boltzmann constant (about  $8.61 \times 10^{-5}$  eV/K), T is a temperature (K). In the present specification, The lifetime L corresponds to a MTTF, i.e. Mean Time To Failure, (h) of HBT, and the temperature T is a value reduced in absolute temperature (K) of a junction temperature  $T_j$

(°C). It is noted that the junction temperature means a temperature at a portion to be subjected to the highest temperature, and generally considered as a temperature of a collector layer as for the HBT. The junction temperature  $T_j$  (°C) in this specification is calculated by a following equation (2):

$$T_j = T_s + R \times P \quad \dots (2)$$

wherein  $T_s$  is an environmental temperature (or ambient temperature) (°C),  $R$  is a heat resistance of the HBT (°C/W),  $P$  is a power (W) supplied to the HBT (i.e. a value of Collector current  $I_C$  (A) multiplied by Collector-emitter voltage  $V_{ce}$  (V)).